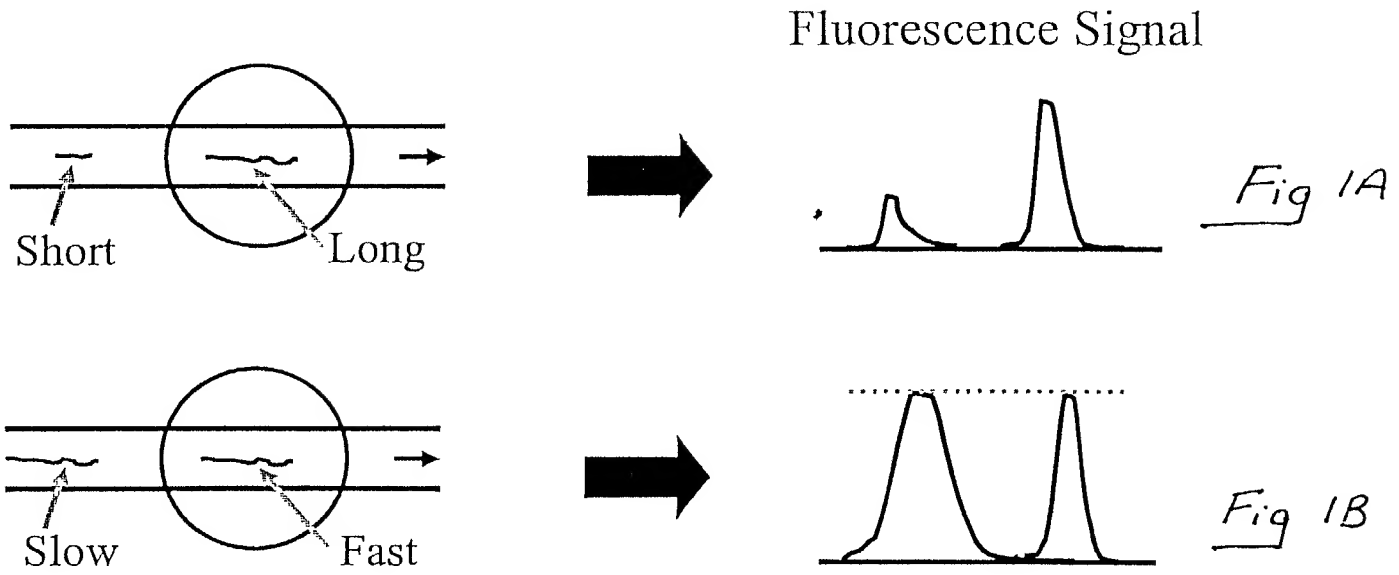


Fig 1A

Fig 1B

VIM - system

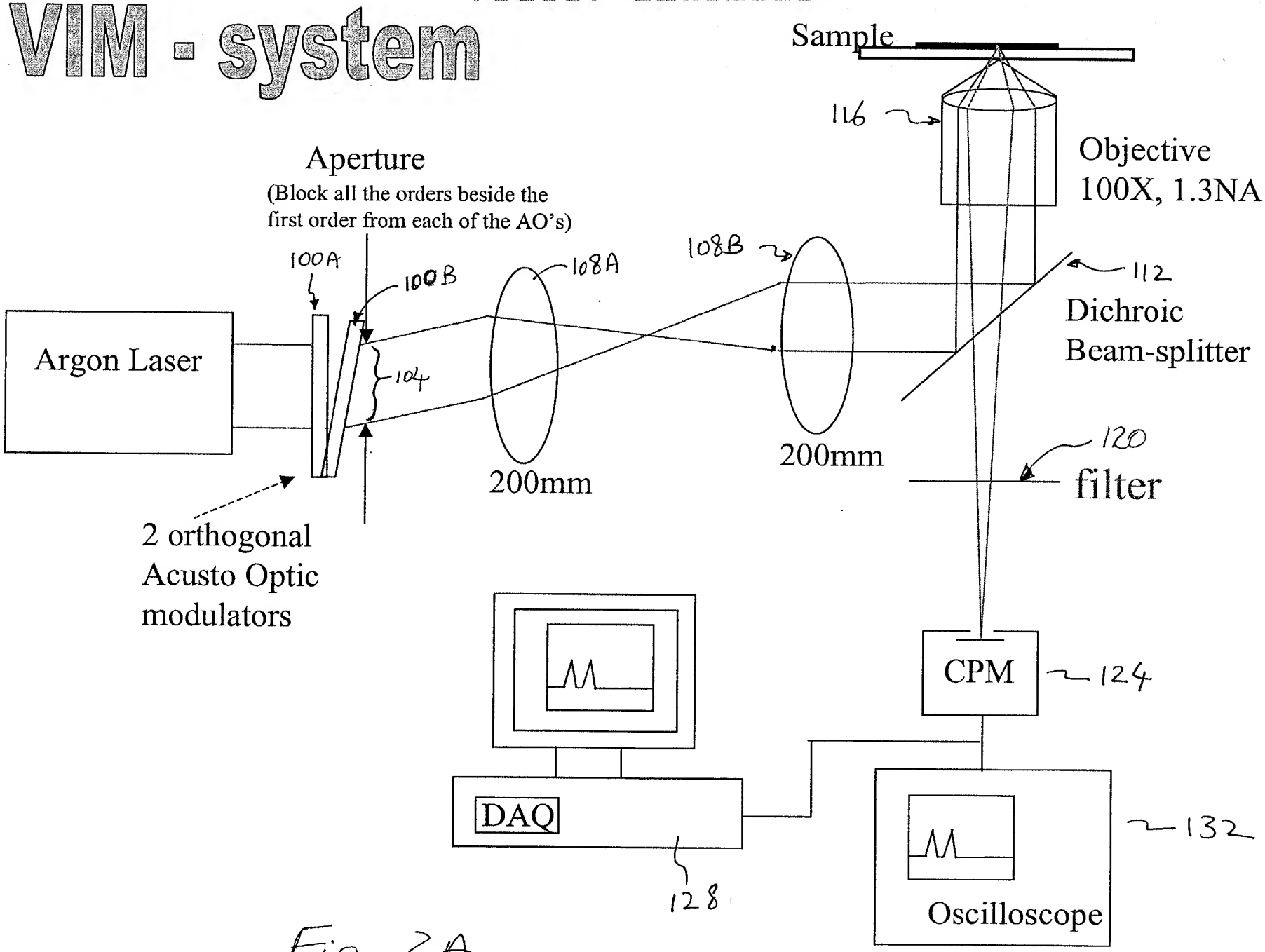


Fig 2A

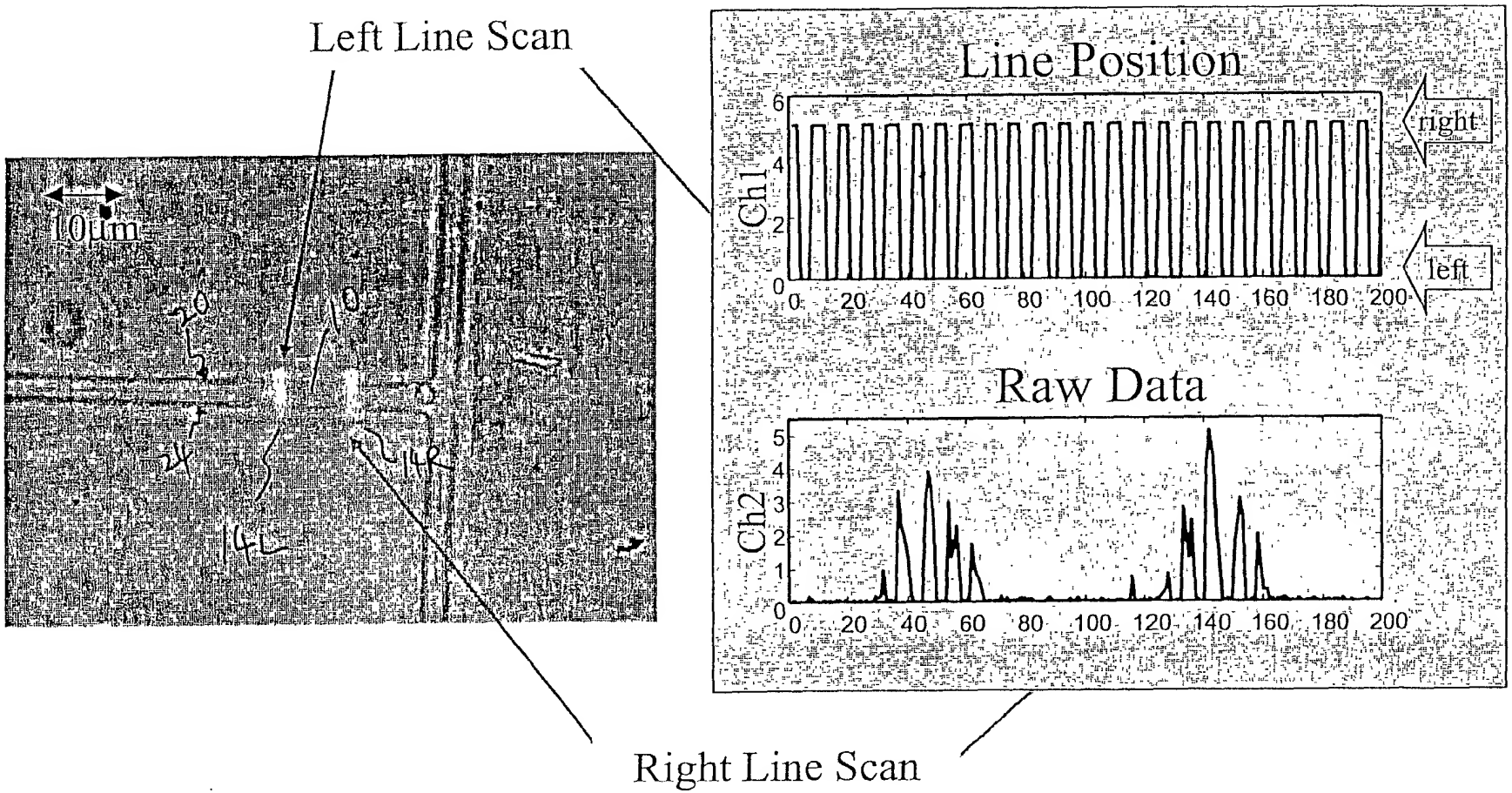


Fig 2B

The beam after the two Acusto Optics Modulators

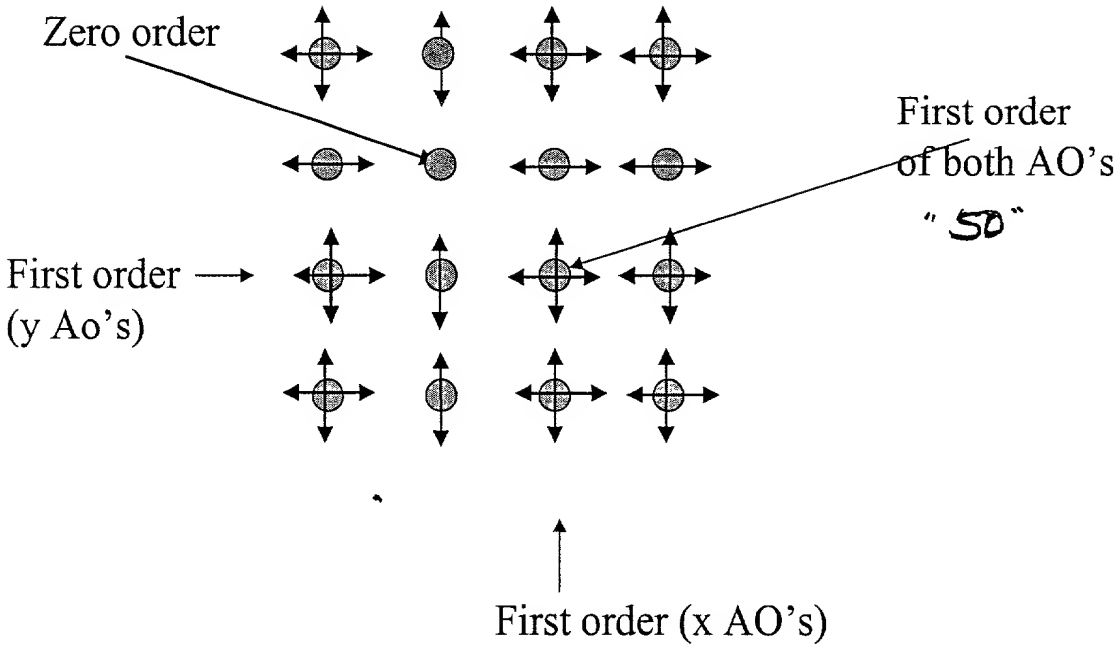


Fig 2C

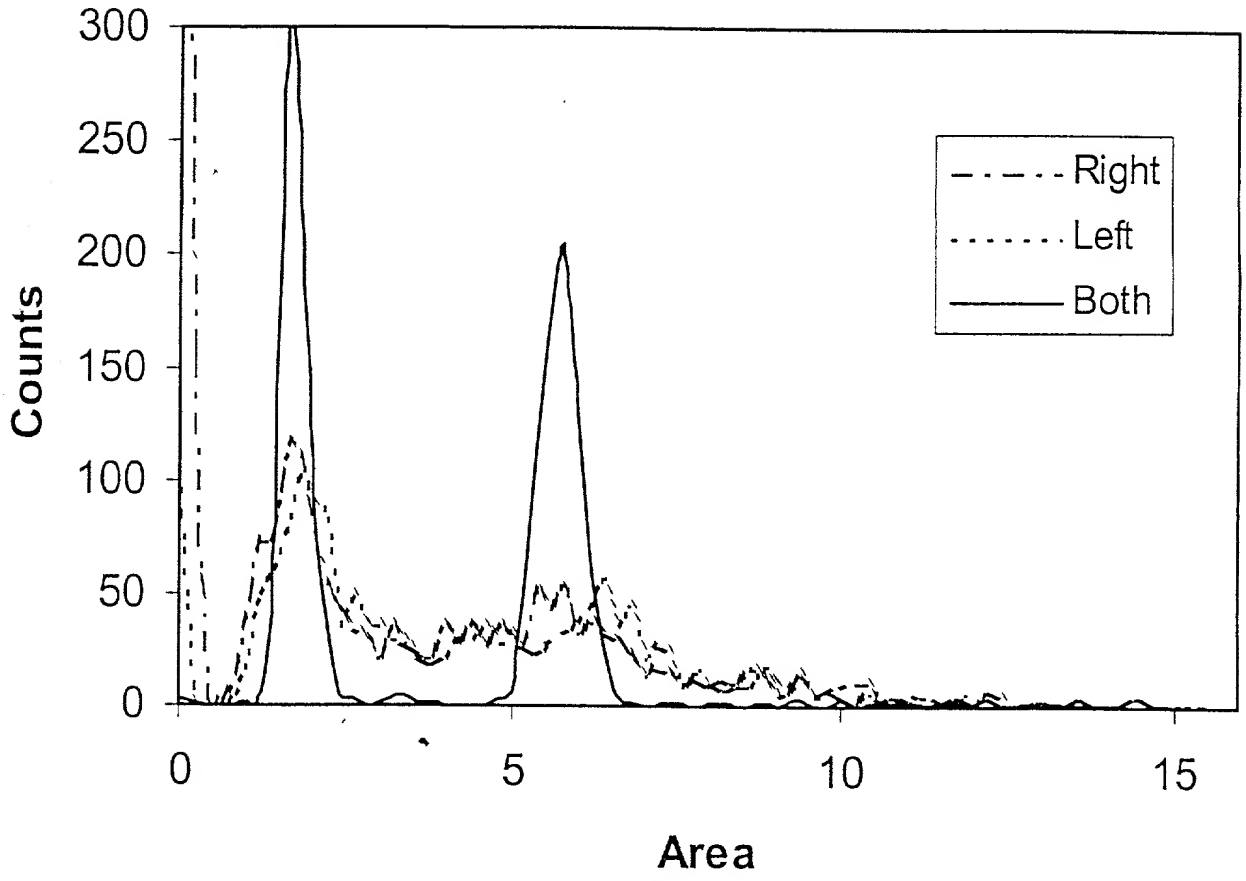

300
250
200
150
100
50
0
Counts
0
5
10
15
Area
Right
Left
Both

Fig 3

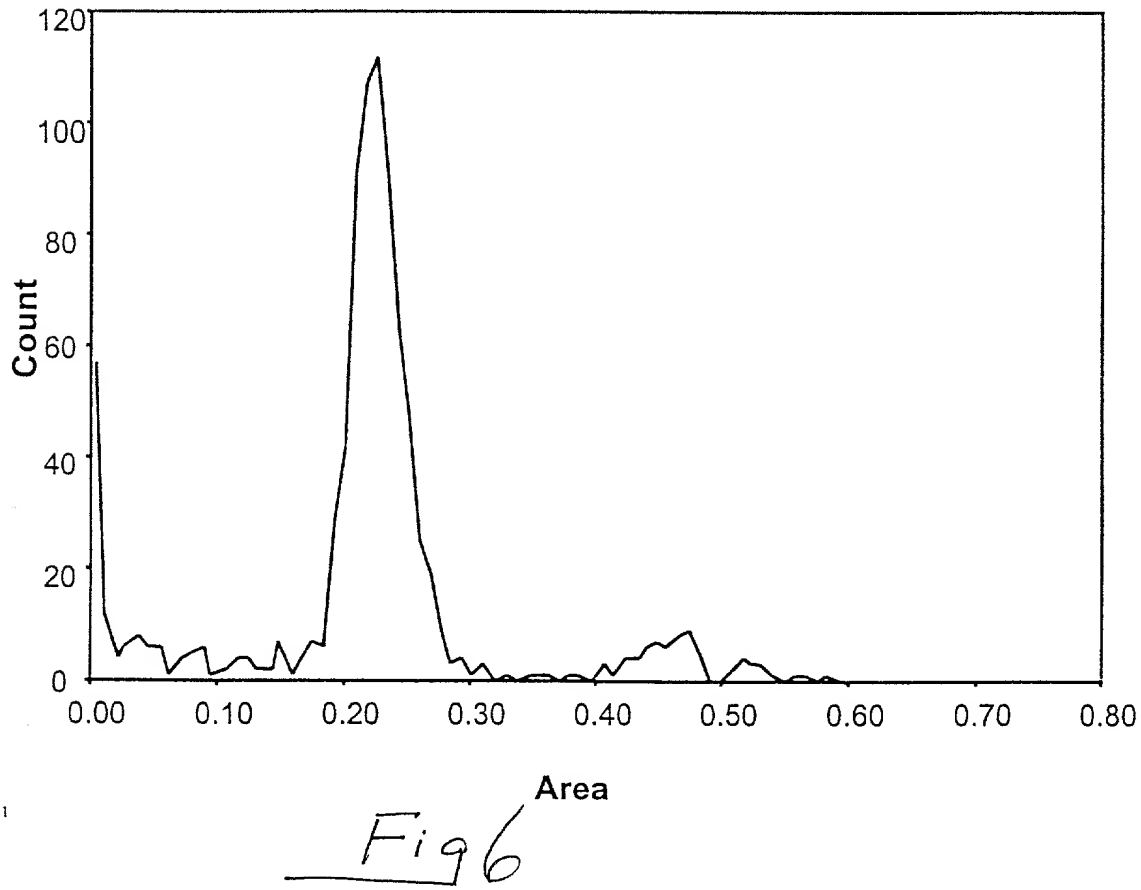

120
100
80
60
40
20
0
Count
0.00
0.10
0.20
0.30
0.40
0.50
0.60
0.70
0.80
Area

Fig 6

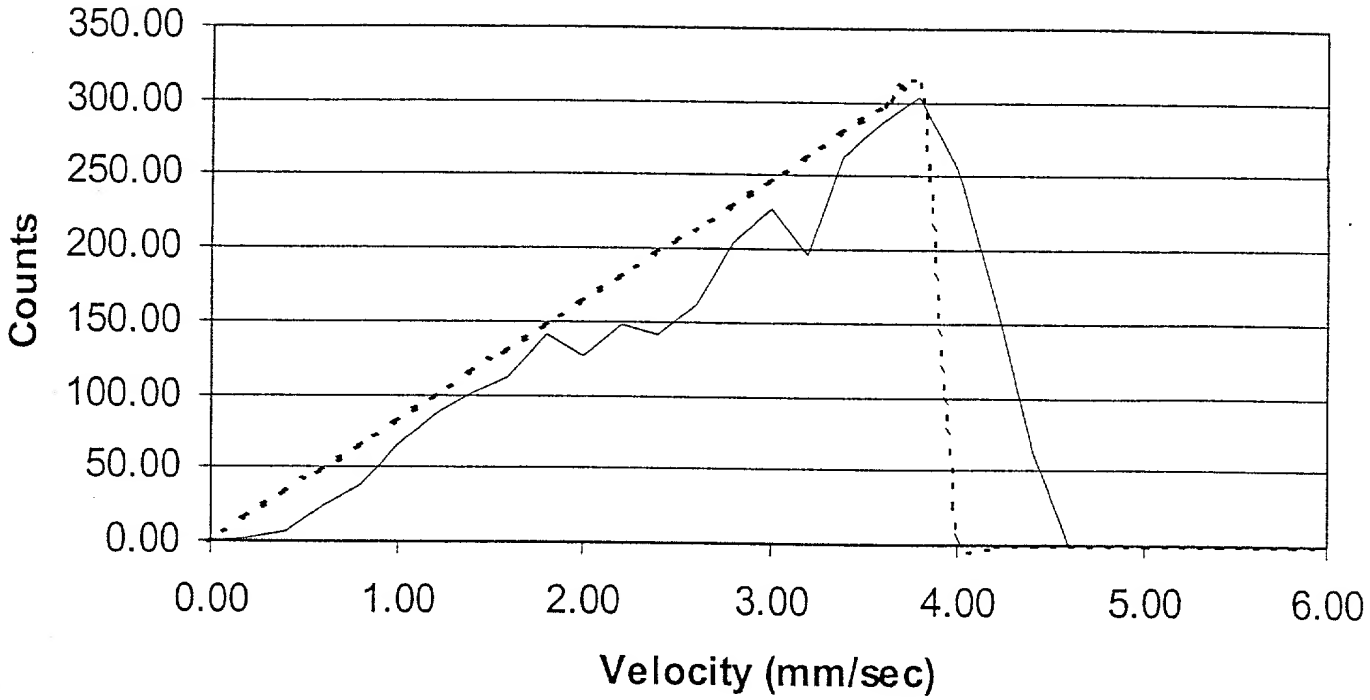

350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
Counts
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Velocity (mm/sec)
Experiment
Theory

Fig 5

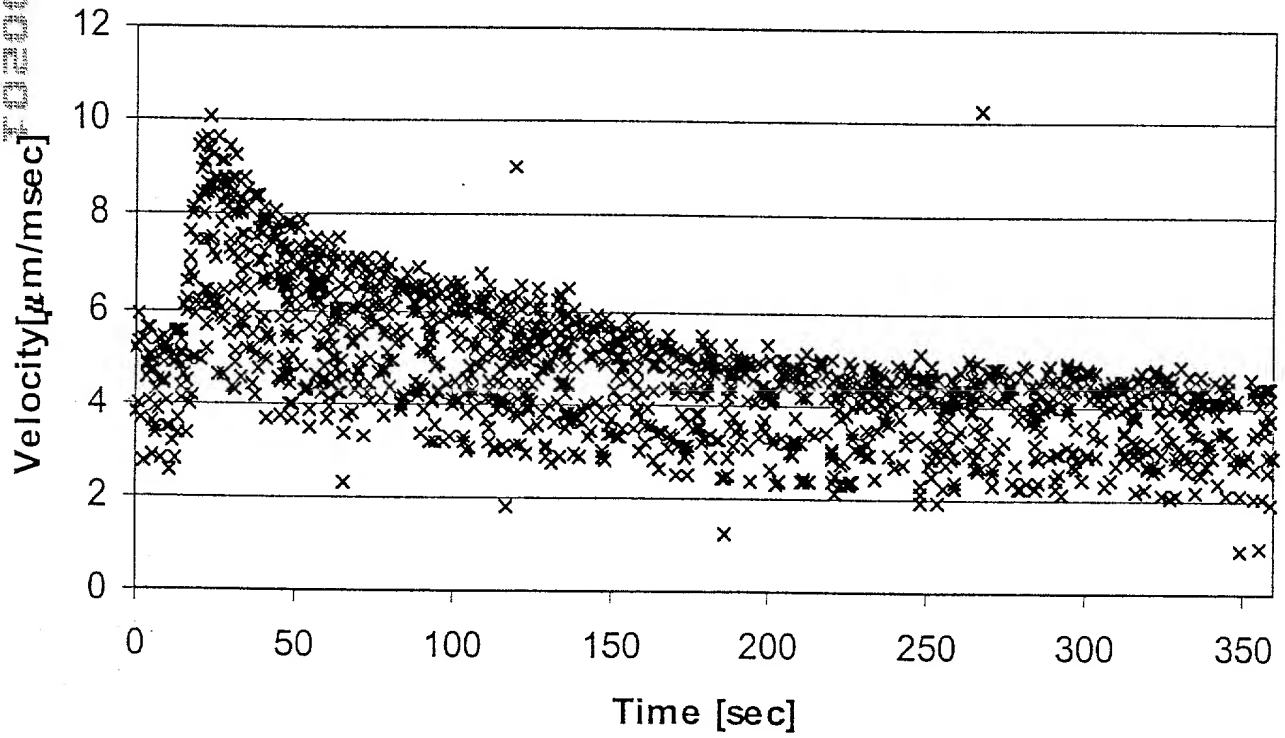

12
10
8
6
4
2
0
Velocity[μm/msec]
0
50
100
150
200
250
300
350
Time [sec]

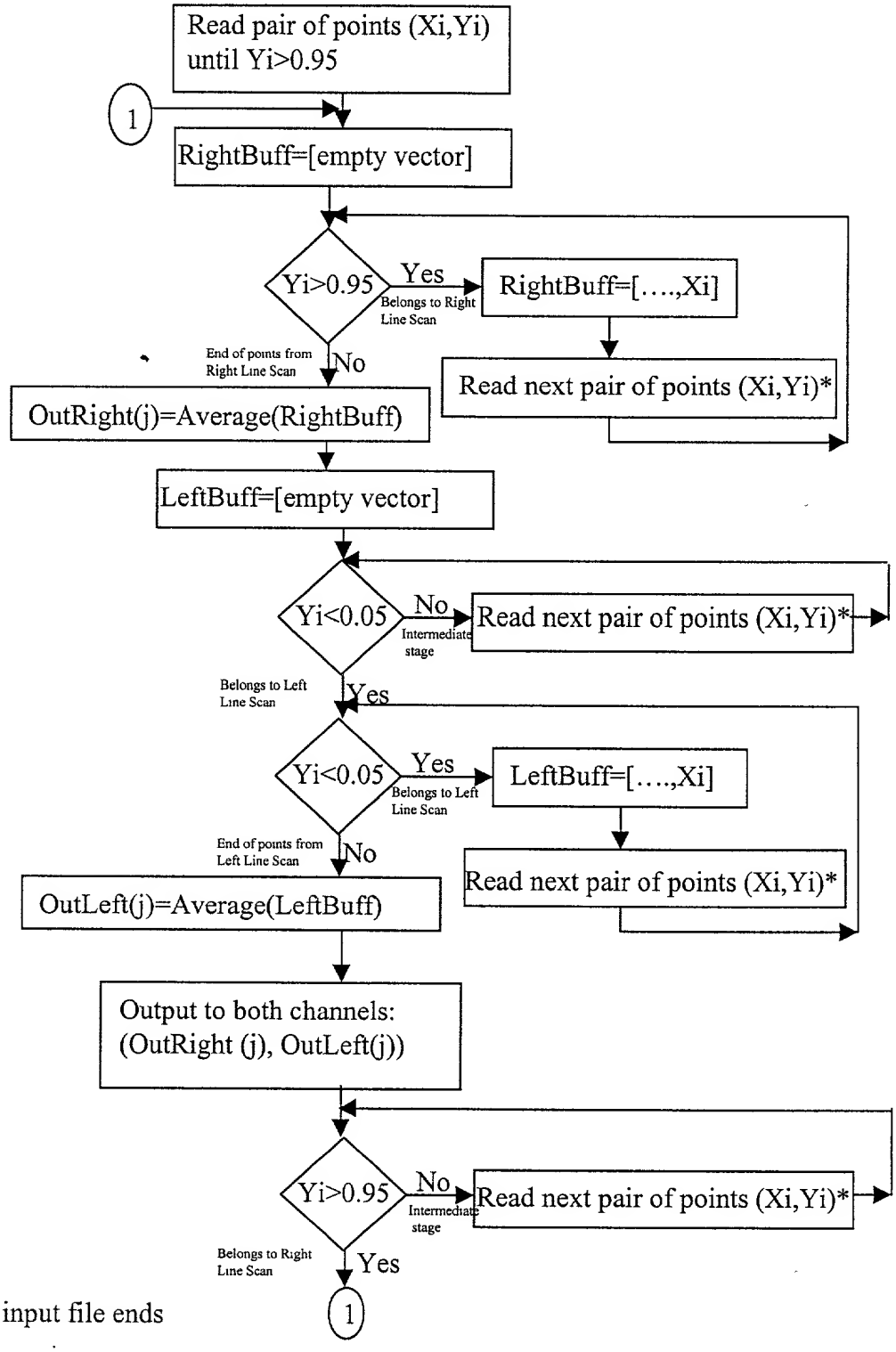
Fig 4

ChDiv

Input - two vectors:Y(i) - channel 1 - square wave - chopping signal, 0<=Yi<=1
X(i) - channel 2 - fluorescence raw data - from the detecting region (both line scan) — Usually Sampled at 40KHz

Output - two vectors: OutRight(j) - fluorescence from Right Line scan
OutLeft (j) - fluorescence from Left Line scan — Usually Sampled at 5KHz

The sampling rate of the output channels allways equals the frequency of the chopping signal



* Program ends when input file ends

Fig 7

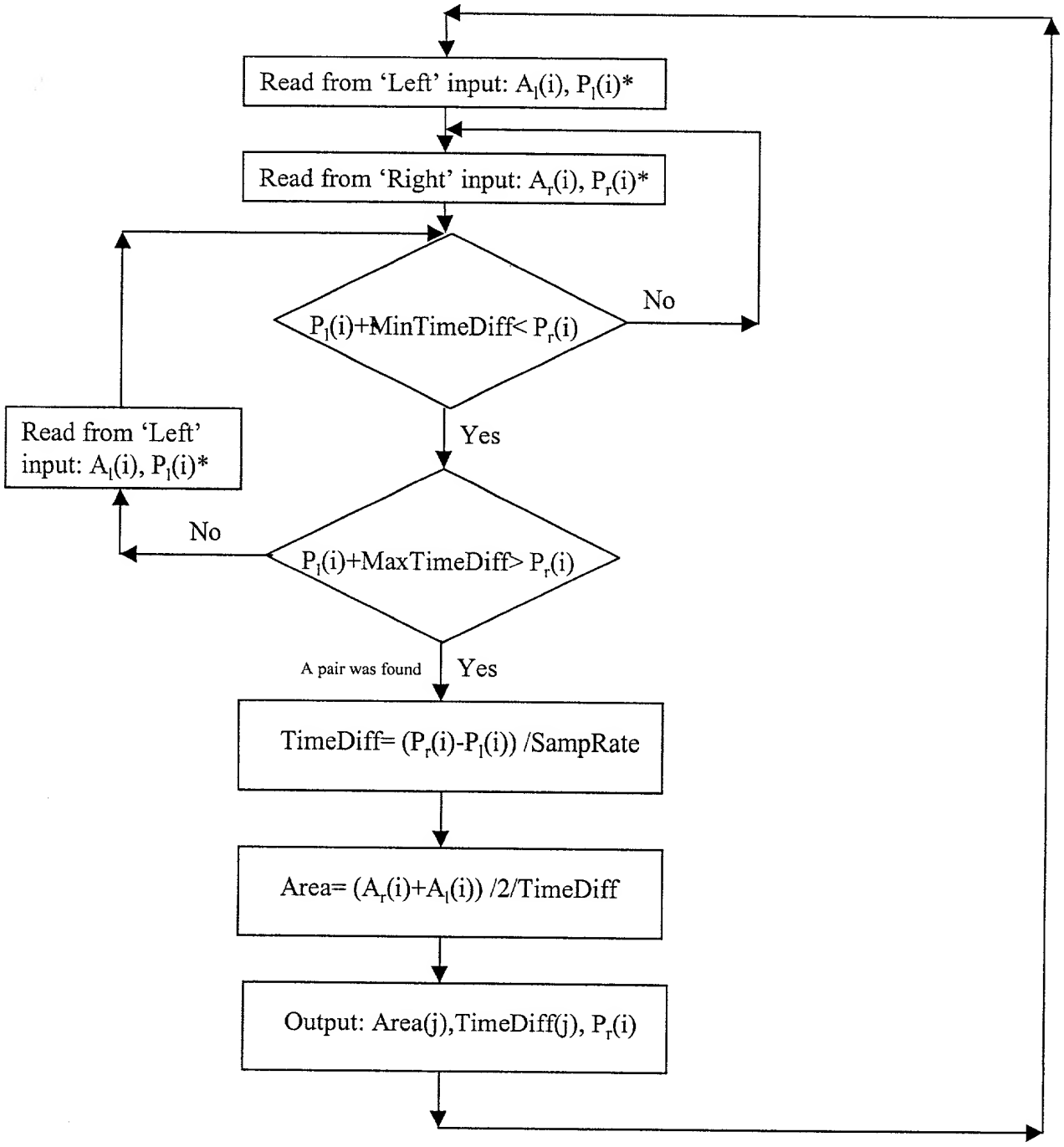
ArVlAnalyzer

Input: two files (one for each line scan).

Each file contain 2 vectors one of Positions (P(i)) and the other has the corresponding Area (A(i))

Output: three vectors - Area, TimeDiff (inversely proportional to velocity), Position

Parameters that can be determined - MinTimeDiff, MaxTimeDiff



Position is presented in point number and not time

TimeDiff is in Seconds and is inversely proportional to the velocity

* Program ends when one of the input files ends

Fig 8